UNIVERSITY OF IDAHO
AGRICULTURAL EXPERIMENT STATION

SCHOOL OF FORESTRY

BLACK LOCUST IN IDAHO

By F. G. MILLER

Black Locust grown under irrigation, by J. A. Waters, Twin Falls, Idaho. Trees were set two feet apart in rows six feet apart, and yielded in eight years posts worth $1,000 per acre. Photograph taken when grove was four years old

CIRCULAR NO. 11. JANUARY, 1920

Published by University of Idaho, Moscow.

INTRODUCTION

Forest planting in the treeless belts of Idaho has been all too meager. Every farm here on which trees can be grown could carry a certain amount of planting to advantage, and no other farm improvement will pay so well in proportion to the expense involved.

There is urgent need for protection from wind, and for this purpose nothing serves better than a shield of trees. An effective shelter belt properly placed about the farm buildings and stockyards will make the handling of livestock more economical, not to mention the added comfort and pleasure it will give to the home.

Far greater emphasis should be placed on the commercial side of forest planting. If the shelter belt is extended into a fair sized wood lot, not only the protective and ornamental value of the planting will be enhanced, but a large part of the timber supply, such as fuel, fence posts, and repair material, used on the farm, can be grown.

Much more tree planting for ornamental purposes should be done. Towns and cities should encourage street planting. School and church grounds offer unexcelled opportunities for planting of this sort. Concerted effort along these lines will add greatly to the attractiveness of the whole region.

The practice of planting trees along public highways is most commendable. Not only do roadside trees add to the beauty of the farm, but they have a positive economic value in the protection they afford to crops and farm animals, and in the products they yield.

As a combination shelter, commercial, and ornamental tree there is none that equals the black locust for the belts in question. Others may be grown here, but this circular will be confined to this one tree.

NATURAL RANGE

Black locust is native to the slopes of the Appalachian Mountains from Pennsylvania to Northern Georgia, and in parts of Arkansas and eastern Oklahoma. It has been extensively planted in the United States, especially east of the Rocky Mountains. It was introduced into the extreme west by the early settlers, and has been widely planted fortunately, in this region, especially in western Utah and eastern Washington.

RANGE FOR PLANTING IN IDAHO

The range of black locust for planting in the treeless belts of Idaho includes practically all of such belts below 4000 feet elevation, where the annual precipitation is 12 to 15 inches or over. Occasionally it succeeds without irrigation, where the rainfall is less than 12 inches. Under irrigation, black locust will succeed anywhere in the state below altitudes of 4000 feet, provided soil conditions are at all favorable.

HABITS AND RATE OF GROWTH

Black locust is adapted to a wide range of soil conditions, but it thrives best on rich loams. Though native to a region of large rainfall, it is surprisingly drought resistant in the dry belts of the west. In parts of Idaho it sometimes freezes back, especially when young, but it usually springs up again from the live stem and makes a good tree. Once thoroughly established, it seldom winter kills seriously. The symmetrical form of black locust, its dark green foilage, which turns a pale yellow in late fall, together with its rich growth of white flowers, appearing in June, make

this tree highly useful for ornamental purposes.

Black locust grows rapidly, making, in favorable situations, an annual height growth of from two to four feet, and increases in diameter from one-third to one-half inch per year. It will make fence posts in from eight to twelve years. It is not attacked by borers in Idaho.

ECONOMIC USES

The wood of black locust is straight grained, strong, dense, hard, readily seasoned, holds its shape well, does not check, and is exceedingly durable in contact with the ground. It is used in bridge construction, the manufacture of vehicles and implements, in ship building and for fence posts. It is one of the best woods known for use as tree nails, and is in great demand at this time by manufacturers of wooden ships. Owing to its great durability in contact with the soil, black locust is more generally used for fence posts than for any other purpose. The average life of locust posts is 25 to 30 years.

PROPAGATION

In establishing a windbreak or wood lot of black locust, the use of one year old seedlings is advised. Such stock will run from 18 to 24 inches in height, which is a desirable size for planting. Somewhat larger stock, say 8 to 10 feet high, may be used to advantage, where only a few trees are wanted as in ornamental planting. Excellent stock may be purchased at cost from the School of Forestry or from nurserymen at reasonable prices, and names of reliable firms will be furnished on application.

Black locust is easily propagated from seed and parties wishing to grow their own stock can readily do so. Full directions will be sent on request.

TIME TO PLANT

The best time to plant is in the early spring, rather than in the fall, and the planting should be done as soon as the soil is readily tillable, the earlier the better after the ground is in shape.

HOW TO HANDLE THE STOCK

Immediately on the arrival of the trees at the railroad station they should be taken to the farm, and if possible, planted the same day. If necessary to hold them over, they should be unpacked and heeled-in. This is done by digging a trench of suitable length, say six feet, and of sufficient depth to take in the roots of the plants full length. One side of the trench should be slightly sloping. Against this sloping side place a layer of trees, roots down, and bank with earth to a level with the surface. The layer of soil should be about two inches thick, well packed, and the outside left somewhat sloping, against which place the next layer of plants, repeating the process till all are heeled-in. The soil should be moist and pliable, but not wet, and the work must be carefully done.

PREPARATION OF THE GROUND

The ground must be put in as thorough a state of cultivation as if it were to be sown to wheat. This is extremely important, as the young trees should be given every advantage possible at the start.

SPACING

In establishing a plantation of black locust where the annual precipitation is less than 25 inches, a spacing of 8x8 feet is recommended. Where the precipitation is in excess of 25 inches yearly, the spacing may be closer, say 4x8 or 6x6 feet. Under irrigation, a spacing of 4x4 feet is commonly used.

In ornamental planting the tendency is to plant too close. The object sought here is symmetrically formed trees, even in late life, which cannot be the case if they are crowded. Black locust where planted for ornamental purposes should not be closer than 40 feet apart, or rarely 30 feet, unless the planting be along the roadside, where the spacing may be 20 to 25 feet.

HOW TO PLANT

An advantageous planting crew in establishing plantations may consist of two men and a boy—the two men provided with spades to do the planting, working side by side, and the boy with a pail partly filled with water, in which the trees are carried, to hand the trees to the planters, as they are needed. Great care should be taken never to allow the roots of the trees to become dry, as a few minutes exposure to the sun and wind may kill them.

In planting, the holes should be deep enough so that when the trees are in place they will stand a little deeper than they stood in the nursery row. When setting the tree, the roots should be spread out as nearly as possible in their natural position. Use the hands in replacing the first few layers of dirt, and see that it is pressed carefully and firmly about the roots.

CARE AND CULTIVATION

The plantation should be given clean tillage indefinitely. This is especially important for the first several years. One purpose of the wide spacing recommended for the dryer belts is to facilitate cultivation. Level surface cultivation according to dry farming methods should be the practice. It is essential to conserve the moisture in every way possible.

Live stock of all kinds must be rigidly excluded. This point cannot be too strongly emphasized. It is as important as continuous cultivation. The plantation must be carefully guarded against fire.

CUTTING BACK

In order to secure straight stems for fence posts, double headed or crooked trees should be cut back to the ground at the end of the first, second, or even third growing season. The stump will send up a strong, vigorous shoot the season following, which in a few years will be as large as the other trees of the stand not so treated. If more than one sprout starts from a given stump, all but the most promising should be cut off in August of the first season.

PRUNING

The wide spacing recommended will make more or less artificial pruning necessary in order to insure desirable fence post stock. Pruning will also stimulate height growth.